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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/656,085	09/06/2000	Jerome Cros	2809.1	8870

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EXAMINER

TAMAI, KARL I

ART UNIT PAPER NUMBER

2834

DATE MAILED: 04/24/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/656,085

Applicant(s)

CROS ET AL.

Examiner

Tamai IE Karl

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 February 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) 5-14 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 15-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 September 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4 and 8. 6) ☐ Other: _____

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DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of Group I in Paper No. 9 is acknowledged.

The traversal is on the grounds that the inventions are to the same invention with different scope of coverage is not persuasive. The invention of claim 1 is directed to the connection of a plurality of coils on the rotor teeth to different commutator segments. This limitation is not found in the second invention which is directed to the specific ratio or stator poles and rotor slots. Similarly the stator pole to rotor slot ratio of the second group is not included in the first group. The specific omission of these limitations from the other group of claims indicates that Applicant considers them to be separately patentable and distinct inventions. Claims 5-14 are withdrawn from further consideration, as being drawn to a nonelected Group II.

The requirement is still deemed proper and is therefore made FINAL.

Drawings

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the stator teeth and coils, the round profile, the oval profile, the circular profile must be shown or the features canceled from the claims. No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

3. The specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1-4 and 15-28 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 1-4 and 17-28 recite the limitation "the terminals". There is not antecedent basis for this limitation in the claims. The examiner notes it is unclear if "the terminals" refers to the terminals of a single coil or the plurality of coils. For the purposes of advancing prosecution on the merits, the examiner will assume that "the terminals" refers to the terminals of different coils. Claim 15 recites the limitation "the magnetic circuit". Claim 16 recites the limitation "the stator teeth". There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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7. Claims 1, 3, and 4 are rejected under 35 U.S.C. 102(b) as being anticipated by Klein (US 4,329,610). Klein teaches a rotor teeth forming 12 coil slots and 24 commutator bars. The teeth having a plurality of coils having which are connected to different commutator bars. It is inherent that the stator has at least 2P poles(a north and south). Klein teaches the laminated rotor is conventional. The examiner takes Official Notice that a conventional lamination is ferromagnetic. The terminals of each of the coils are connected to different commutator sections as well as the plurality of coils are connected to different commutator sections. The examiner notes that the preamble does not carry patentable weight in the claims.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 2, 15, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Klein, in further view of Ward (US 5,121,021). Klein teaches every aspect of the invention except the motor having a permanent magnet stator with a magnetic core and the magnetic circuit having a metal powder. Ward teaches a permanent magnet motor with a soft magnetic core for supporting permanent magnets. It would have been obvious to a person of ordinary skill in the art at the time of the invention to construct the

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motor of Klein with the permanent magnet stator of Ward to provide a field magnet for the motor with reduce eddy current losses.

10. Claims 16 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Klein and Ward, in further view of Wong et al. (Wong) (US 5,304,885). Klein and Ward teach every aspect of the invention except the center part of the rotor/stator teeth having rounded edges. Wong teaches rotor poles with rounded edges. It would have been obvious to a person of ordinary skill in the art at the time of the invention to construct the motor of Klein and Ward with rounded edges on the rotor poles because Wong teaches rounded edges improves airflow and prevents carbon dust build up.

11. Claims 17-19 and 23-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Klein and Ward, in further view of Case et al. (Case) (US 3,095,515). Klein and Ward teach every aspect of the invention, except the poles having the same axial length as the coil with the tips being axially longer, and the commutator extending under the tips. Case teaches the tips 48, 50 axially longer than the poles with the commutator 54 extending under the tips to allow for electrical connection with the coils. It would have been obvious to a person of ordinary skill in the art at the time of the invention to construct the motor of Klein and Ward with the commutator and poles of Case to provide a small motor.

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12. Claims 20 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Klein and Ward, in further view of Katagiri (US 5,949,172). Klein and Ward teach every aspect of the invention, except the skew pole tips on unskewed teeth. Katagiri teaches skewed pole tips in figures 10a and 10b on unskewed teeth. It would have been obvious to a person of ordinary skill in the art at the time of the invention to construct the motor of Klein and Ward with the commutator and poles of skewed poles of Katagiri to prevent cogging.

13. Claims 27 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Klein, in further view of Tanaka et al. (Tanaka) (US 6,057,626). Klein and Ward teach every aspect of the invention, except the equalizer connected to the commutator. Tanaka teaches an equalizer to connect segments with the same potential. It would have been obvious to a person of ordinary skill in the art at the time of the invention to construct the motor of Klein with the equalizer on the commutator to connect segments of the same potential.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karl I.E. Tamai at (703) 305-7066. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Nestor Ramirez, can be reached at (703)308-1371. The facsimile number for the Group is (703)305-3432. Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist at (703) 308-0956.

Karl I Tamai
PRIMARY PATENT EXAMINER
April 20, 2002

KARL I. TAMAI
PRIMARY EXAMINER

